

Missouri Title V Facts:

Obesity and Physical Activity

Missouri
DHSS

Department of Health
and Senior Services

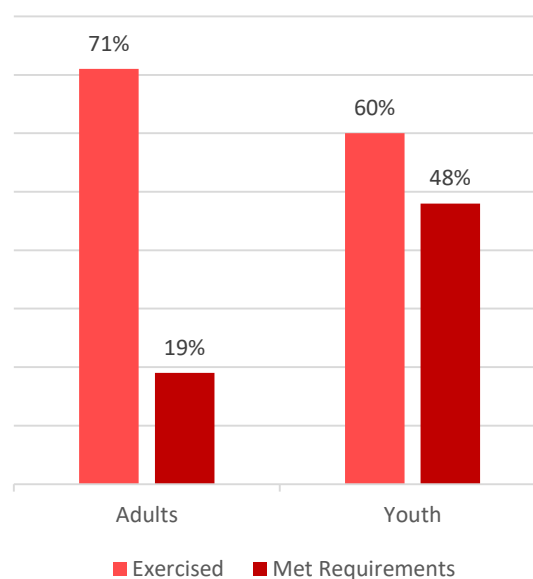
Background

The National Center for Health Statistics estimates that over 42% of American adults aged 20 years and older had obesity in 2017-2018, up from 31% in 1999-2000, and 9% were severely, or morbidly, obese. Overweight and obesity are linked to a variety of health problems, including increased risk of diabetes, heart attack, stroke, and bone and joint problems such as osteoarthritis. Babies born to obese women have higher rates of neural tube defects (e.g, spina bifida) and prematurity¹. The relative risk of developing gestational diabetes or preeclampsia increases by 10% each for every 10% increase in a pregnant woman's Body Mass Index (BMI) over 29. Increased BMI can also increase the relative risk of experiencing a miscarriage. It is estimated that 11% of all neonatal deaths are linked to the consequences of mothers being overweight or obese during pregnancy².

As the rate of adult overweight and obesity has increased, so has the rate for children. In 2017-2018, 19% of children aged 2 to 17 years were obese, up from 14% in 2009, representing 13.7 million obese children across the nation. In Missouri, 17% of WIC-enrolled two-to-four year olds were overweight, and an additional 14% were obese. Among high-school students, males are much more likely than females to be obese (23%, compared to 14%), and black or African American students as a whole (20%) are slightly more likely to be obese than white students (18%).

Obesity and overweight can be mitigated by physical activity and a healthy diet low in fats and refined sugars, and high in fruits, vegetables, and whole grains. The Centers for Disease Control and Prevention (CDC) recommend that children and adolescents of ages 6 through 17 should do at least 1 hour per day of moderate-to-vigorous physical activity. Women who are pregnant or postpartum should do at least 30 minutes per day of moderate-intensity aerobic activity per week. Furthermore, women who already engage in vigorous-intensity aerobic activity can continue to do so during pregnancy and after pregnancy³. Changes in dietary behaviors over the past decade may also contribute to increased health risks. For example, while the percent of high school students who say they eat vegetables one or more times per day has risen from 21% to 59% between 2009 and 2019, the percentage of students who reported drinking one or more sodas per day increased from 32% to 74% during this same time⁴.

Figure 1. Respondents who said they exercised in the past month versus how many actually met exercise guidelines, MO BRFSS 2018, MO YRBS 2019



Food Insecurity and Access to Healthy Food

Overconsumption of food is the biggest driver of obesity. A person's food choices can be affected by many different variables, especially availability and accessibility⁵. Food deserts, areas that have limited accessibility and availability to affordable and/or nutritious food, are spread all across Missouri. A food desert is an area more than half a mile from a supermarket in urban areas, or more than 10 miles in rural areas (Figure 2a). Figure 2b shows the percentage of households with no vehicle⁶. Areas that intersect, such as North-Central and Southeastern Missouri, have higher rates of obesity, possibly driven by challenges accessing nutritious food.

Figure 2a. Missouri Census Tracts That are Identified Food Deserts

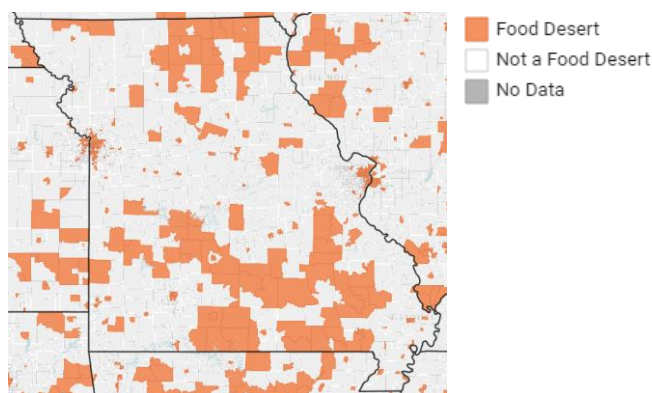
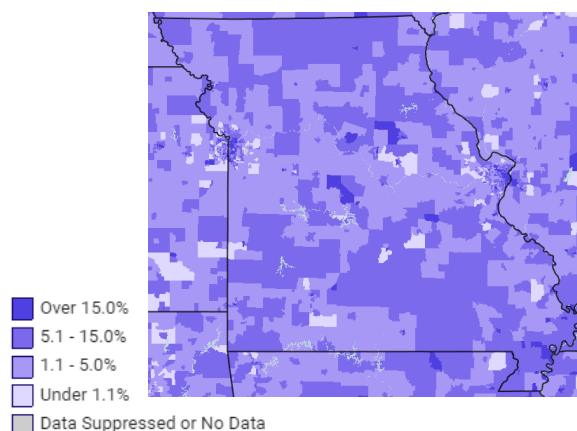


Figure 2b. Percentage of Households with No Vehicle, By Missouri Census Tract



Youth Physical Activity

Making sure youth stay physically active is important for many reasons. Not only is it one of the best ways to prevent childhood obesity but new evidence shows that the benefits of childhood physical activity can last long into someone's life. Physical activity early on allows young people to develop a healthy musculoskeletal structure, cardiovascular system, hand-eye coordination, and maintain a healthy body weight⁷.

As students in Missouri get older, they spend less time engaging in physical activity during school hours. During elementary school, students are required to receive 50 minutes of physical education (PE) per week (25 minutes/week for half-day kindergarten). Missouri statute (RSMo 167.720) requires schools to ensure that students participate in 150 minutes per week (30 minutes per day) of moderate physical activity and that students with disabilities participate to the extent appropriate, in addition to 20 minutes of recess per day. School districts are required to offer a minimum of 3000 minutes of PE per year for middle school/junior high; however, high schools are only required to provide access to PE for students so that they can meet their minimum graduation requirements⁸⁹.

The number of high school students taking 5 days of PE decreases as students transition from 9th grade (42%) to 12th grade (20%). Only 48% of high school students are physically active for at least one hour on five or more days. Looking at the demographic breakdown of this level of activity, male (50%) and white (50%) students outnumber female (46%) and black (41%) students respectively¹⁰.

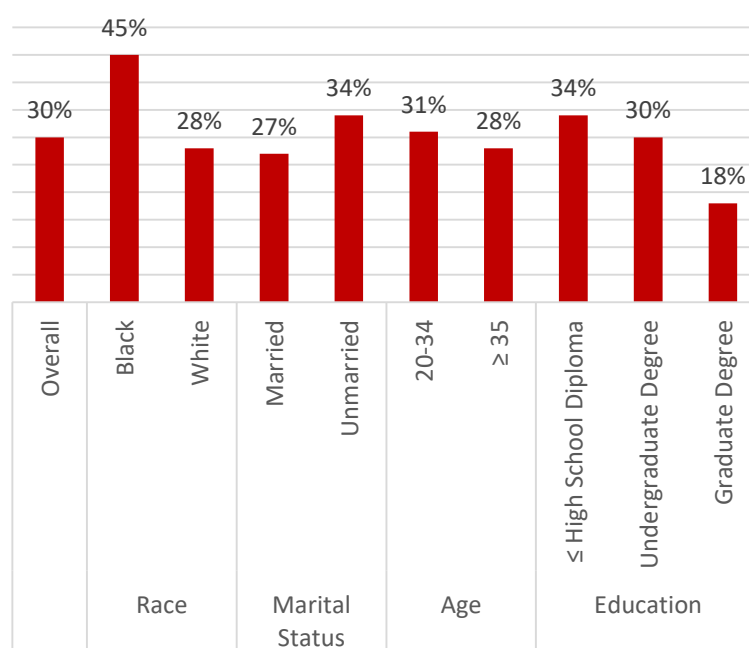
Special Health Care Needs

Children and adolescents with special health care needs (SHCN) face different barriers to physical activity than other youth in society. Looking closer at residential neighborhood amenities we can start to get a better view of how certain barriers actually affect youth with SHCN and how they engage physical activity. The National Survey of Children's Health (NSCH) found that CYSHCN had fewer days each week with physical activity compared to non-SHCN children. (3.7 and 4.1 days, respectively). Among both children and adolescents with SHCN, accessibility of neighborhood amenities, like parks; playgrounds; sidewalks; or recreation centers, were associated with increased physical activity. The absence of neighborhood facilities was associated with a reduced level of physical activity for children with SHCN, suggesting children with SHCN may be more dependent on these amenities¹¹. Communities offering these facilities should consider how accessible they are for children/adolescents with SHCN. Focus groups have identified several barriers including equipment barriers; economic issues; public perception of disability; inadequate professional knowledge, education or training issues; and availability of resources¹².

Maternal Physical Activity

Physical activity and maintaining a healthy weight are also important issues for women who are planning to get pregnant, or who might become pregnant. Research has shown that obesity during pregnancy can affect the health of both the mother and the child. The prepregnancy obesity rate in Missouri in 2018 was 29%, and an additional 25% were overweight. Prior to pregnancy, 30% of women said they were dieting to lose weight while 36% said they were exercising 3 or more days per week¹³.

Figure 3. Prepregnancy Obesity By Demographic, MO PRAMS 2018



What Is Being Done?

State Physical Activity and Nutrition Grant: The SPAN grant at DHSS operates a transportation workgroup, collaborating with 7 rural MO communities to increase safe pedestrian options (e.g., better trails, development of pedestrian bridges, etc). Working with early childhood education centers, through the NAPSACC (Nutrition and Physical Activity Self-Assessment for Child Care) program, and encouraging early childhood educators to focus on improving physical activity measures, like active play and reducing screen time.

Team Nutrition Grant: Team Nutrition grant-funded efforts focus on exposing young children to different foods and training food staff and educators on nutrition and healthy menus, with the goal of assisting preschool and school-aged choices to make healthy food choices.
<https://health.mo.gov/living/wellness/nutrition/teamnutrition/>

Local Public Health Agencies: The MCH Services Program and the Bureau of Community Health and Wellness partner with LPHAs to implement a statewide healthy lifestyle initiative utilizing the 12345 Fit-Tastic! framework to promote healthy lifestyles and healthy weight for all children. 14 LPHAs chose to address obesity as part of their MCH services contracts in 2018.

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